

ANALYTICAL RESULTS
TABLE 1A*

Page 1 of 3

Case No.: SAS 7841Y Memo #03

Site: Newmark-Muscooy

Lab.: Analytical Resources, Inc. (ARI)

Reviewer: Rameen Moezzi, ESAT/ICF Technology, Inc.

Date: July 2, 1993

Analysis Type: Low Level Water Samples
for SAS Volatiles by EPA
Drinking Water Method 524.2

Concentration in ug/L

Station Location	WMW01E-22			WMW01D-21			WMW01A-21			WMW07A-21			WMW07B-21			WTR06-01			WMW015-21		
Sample I.D.	SY5611 D1			SY5612			SY5613			SY5614			SY5615			SY5616 TB			SY5617		
Date of Collection	4/28/93			4/28/93			4/28/93			4/29/93			4/29/93			4/29/93			4/29/93		
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	0.3			0.2 U	J	C	0.2 U	J	C	6			20			0.2 U			0.2 U		
Vinyl chloride	0.2 U			0.2 U	J	C	0.2 U	J	C	0.1 L	J	A	0.2 U			0.2 U			0.4		
Chloroethane	0.2 U			0.2 U	J	C	0.2 U	J	C	0.2 U			0.2 U			0.2 U			0.4		
Trichlorofluoromethane	0.2 U			0.2 U	J	C	0.2 U	J	C	3			4			0.2 U			0.2 U		
1,1-Dichloroethene	0.2 U			0.2 U	J	C	0.2 U	J	C	0.2 L	J	A	0.2 U			0.2 U			0.2 U		
Methylene chloride	0.2 U			0.2 U	J	C	0.2 U	J	C	0.2 U			0.2 U			1			0.2 U		
trans-1,2-Dichloroethene	0.2 U			0.2 U	J	C	0.2 U	J	C	0.3			0.2 U			0.2 U			0.2 U		
1,1-Dichloroethane	0.1 L	J	A	0.2 U	J	C	0.2 U	J	C	0.9			0.7			0.2 U			0.4		
cis-1,2-Dichloroethene	0.2			0.3	J	C	0.2 L	J	AC	3			0.9			0.2 U			0.2 U		
Chloroform	0.2 U			0.2 U	J	C	0.2 U	J	C	0.2 U			0.2 U			2			0.2 U		
1,1,1-Trichloroethane	0.2 L	J	A	0.2 U	J	C	0.2 U	J	C	0.2 U			0.2 U			0.2 U			0.2		
Carbon tetrachloride	0.2 U			0.2 U	J	C	0.2 U	J	C	0.4			0.2 U			0.2 U			0.2 U		
Trichloroethene	0.4			0.6	J	C	0.2 L	J	AC	4			3			0.2 U			0.2 U		
1,2-Dichloropropane	0.2 U			0.2 U	J	C	0.2 U	J	C	0.4			0.2 U			0.2 U			0.2 U		
Toluene	1 U	J	B	1 U	J	BC	0.4 U	J	BC	0.2 U	J	B	0.2 U	J	B	0.5			2 U	J	B
Tetrachloroethene	0.2 U			0.2 U	J	C	0.1 L	J	AC	19			19			0.2 U			0.2 U		
Ethylbenzene	0.2 U			0.2 U	J	C	0.2 U	J	C	0.2 U			0.2 U			0.2 U			0.2 U		
m,p-Xylene	0.1 L	J	A	0.4 U	J	C	0.4 U	J	C	0.4 U			0.4 U			0.4 U			0.4 U		
o-Xylene	0.1 L	J	A	0.2 U	J	C	0.2 U	J	C	0.2 U			0.2 U			0.2 U			0.2 U		
1,2,4-Trimethylbenzene	0.1 L	J	A	0.2 U	J	C	0.2 U	J	C	0.2 U			0.2 U			0.2 U			0.1 L	J	A

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter.

QL-Quantitation Limits

NA-Not Analyzed

D1, D2, etc.-Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

ND-Not Detected

ANALYTICAL RESULTS
TABLE 1A*

Page 2 of 3

Case No.: SAS 7841Y Memo #03

Site: Newmark-Muscoy

Lab.: Analytical Resources, Inc. (ARI)

Reviewer: Rameen Moezzi, ESAT/ICF Technology, Inc.

Date: July 2, 1993

Analysis Type: Low Level Water Samples
for SAS Volatiles by EPA
Drinking Water Method 524.2

Concentration in ug/L

Station Location	WMW01B-21			WMW-09-21			WFI09-01			MUNI-103-01			WTR07-01			WMW01C-21			WMW01H-21		
Sample I.D.	SY5618			SY5619			SY5620 FB			SY5621			SY5622			SY5623			SY5625		
Date of Collection	5/03/93			5/04/93			5/04/93			5/04/93			5/03/93			5/04/93			5/04/93		
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	0.2 U			29	J	D	0.2 U			0.2 U			0.2 U			0.2 U			2	J	D
Vinyl chloride	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.4		
Chloroethane	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Trichlorofluoromethane	0.2 U			6			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
1,1-Dichloroethene	0.2 U			0.2			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Methylene chloride	0.2 U			0.2 U	J	B	0.7			0.2 U			1 U	J	B	0.2 U			0.5 U	J	B
trans-1,2-Dichloroethene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
1,1-Dichloroethane	0.2 U			1			0.2 U			0.2 U			0.2 U			0.2 U			0.4		
cis-1,2-Dichloroethene	0.2 U			1			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Chloroform	0.2 U			0.2 U	J	B	3			0.2 U			2 U	J	B	0.2 U			0.2 U		
1,1,1-Trichloroethane	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
Carbon tetrachloride	0.2 U			0.2 U			0.2 U			0.1 L	J	A	0.2 U			0.2 U			0.2 U		
Trichloroethene	0.2 U			6			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
1,2-Dichloropropane	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Toluene	1 U	J	B	0.3 U	J	B	0.2 U			0.2 U			0.3 U	J	B	1 U	J	B	0.6 U	J	B
Tetrachloroethene	0.2 U			27			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Ethylbenzene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.1 L	J	A	0.2 U		
m,p-Xylene	0.4 U			0.4 U			0.4 U			0.4 U			0.4 U			0.6			0.4 U		
o-Xylene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.6			0.2 U		
1,2,4-Trimethylbenzene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.1 L	J	A	0.1 L	J	A

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2.

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ND-Not Detected

ANALYTICAL RESULTS
TABLE 1A*

Page 3 of 3

Case No.: SAS 7841Y Memo #03

Site: Newmark-Muscoy

Lab.: Analytical Resources, Inc. (ARI)

Reviewer: Rameen Moezzi, ESAT/ICF Technology, Inc.

Date: July 2, 1993

Analysis Type: Low Level Water Samples
for SAS Volatiles by EPA
Drinking Water Method 524.2

Concentration in ug/L

Station Location Sample I.D. Date of Collection	WTR08-01 SY5629 TB 5/04/93			METHOD BLANK VBLK1			METHOD BLANK VBLK2			METHOD BLANK VBLK3			METHOD BLANK VBLK4			QL		
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
Vinyl chloride	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
Chloroethane	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
Trichlorofluoromethane	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
1,1-Dichloroethene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
Methylene chloride	1			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
trans-1,2-Dichloroethene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
1,1-Dichloroethane	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
cis-1,2-Dichloroethene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
Chloroform	3			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
1,1,1-Trichloroethane	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
Carbon tetrachloride	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
Trichloroethene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
1,2-Dichloropropane	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
Toluene	0.3			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
Tetrachloroethene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
Ethylbenzene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
m,p-Xylene	0.4 U			0.4 U			0.4 U			0.4 U			0.4 U			0.4		
o-Xylene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		
1,2,4-Trimethylbenzene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2		

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter.

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D1, D2, etc.-Field Duplicate Pairs

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BG-Background Sample

ND-Not Detected

TABLE 1B
DATA QUALIFIERS

The definitions of the following qualifiers are prepared according to the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

NO QUALIFIERS indicate that the data are acceptable both qualitatively and quantitatively.

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- L Indicates results which fall below the Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

TABLE 2
Sample Quantitation Limits

Case No.: SAS 7841Y Memo #03
 Site: Newmark-Muscoy
 Laboratory: Analytical Resources, Inc. (ARI)
 Reviewer: Rameen Moezzi
 ESAT/ICF Technology, Inc.
 Date: July 2, 1993

<u>Volatile Compounds</u>	<u>Units. ug/L</u>	<u>Q</u>	<u>C</u>
Dichlorodifluoromethane	0.2	J	C
Chloromethane	0.2	J	C
Bromomethane	0.2	J	C
Vinyl chloride	0.2	J	C
Chloroethane	0.2	J	C
Trichlorofluoromethane	0.2	J	C
Methylene chloride	0.2	J	C
1,1-Dichloroethene	0.2	J	C
1,1-Dichloroethane	0.2	J	C
2,2-Dichloropropane	0.2	J	C
trans-1,2-Dichloroethene	0.2	J	C
cis-1,2-Dichloroethene	0.2	J	C
Chloroform	0.2	J	C
1,2-Dichloroethane	0.2	J	C
1,1,1-Trichloroethane	0.2	J	C
Carbon tetrachloride	0.2	J	C
Bromodichloromethane	0.2	J	C
Bromochloromethane	0.2	J	C
1,2-Dichloropropane	0.2	J	C
1,3-Dichloropropane	0.2	J	C
1,1,2,2-Tetrachloroethane	0.2	J	C
trans-1,3-Dichloropropene	0.2	J	C
Trichloroethene	0.2	J	C
Dibromochloromethane	0.2	J	C
Dibromomethane	0.2	J	C
1,1,2-Trichloroethane	0.2	J	C
Benzene	0.2	J	C
cis-1,3-Dichloropropene	0.2	J	C
1,1-Dichloropropene	0.2	J	C
Bromoform	0.5	J	C
Tetrachloroethene	0.2	J	C
Toluene	0.2	J	C
1,2-Dibromoethane	0.2	J	C
Chlorobenzene	0.2	J	C
1,1,1,2-Tetrachloroethane	0.2	J	C
Ethylbenzene	0.2	J	C
Styrene	0.2	J	C

Q - Qualifier

C - Comment

TABLE 2
(cont'd)

<u>Volatile Compounds</u>	<u>Units. ug/L</u>	<u>Q</u>	<u>C</u>
m,p-Xylenes	0.4	J	C
o-Xylene	0.2	J	C
Isopropylbenzene	0.2	J	C
1,2,3-Trichloropropane	0.2	J	C
n-Propylbenzene	0.2	J	C
Bromobenzene	0.2	J	C
1,3,5-Trimethylbenzene	0.2	J	C
s-Butylbenzene	0.2	J	C
n-Butylbenzene	0.2	J	C
4-Isopropyltoluene	0.2	J	C
1,3-Dichlorobenzene	0.2	J	C
1,4-Dichlorobenzene	0.2	J	C
1,2-Dichlorobenzene	0.2	J	C
2-Chlorotoluene	0.2	J	C
3-Chlorotoluene	0.2	J	C
tert-Butylbenzene	0.2	J	C
1,2,4-Trimethylbenzene	0.2	J	C
1,2-Dibromo-3-chloropropane	0.2	J	CD
1,2,4-Trichlorobenzene	0.2	J	C
Hexachlorobutadiene	0.2	J	C
Naphthalene	0.2	J	C
1,2,3-Trichlorobenzene	0.2	J	C
2-Chloroethylvinylether	0.2	J	C

Q - Qualifier

C - Comment

To calculate the sample quantitation limits, multiply CRQL by the following factors:

<u>Sample No.</u>	<u>Volatiles</u>
All samples	1.0
Method blanks	1.0

TPO: []FYI [X]Attention []Action

Region IX

ORGANIC REGIONAL DATA ASSESSMENT

Case No. SAS 7841Y Memo #03 LABORATORY ARI

SDG NO. SY5611 SITE NAME Newmark-Muscoy

SOW EPA Method 524.2 REVIEW COMPLETION DATE July 2, 1993

REVIEWER [] ESD [X] ESAT REVIEWER'S NAME Rameen Moezzi

NO. OF SAMPLES 15 WATER _____ SOIL _____ OTHER _____

	524.2			
	VOA	BNA	PEST	OTHER
1. HOLDING TIMES	<u>M</u>	_____	_____	_____
2. GC-MS TUNE/GC PERFORMANCE	<u>O</u>	_____	_____	_____
3. INITIAL CALIBRATIONS	<u>X</u>	_____	_____	_____
4. CONTINUING CALIBRATIONS	<u>X</u>	_____	_____	_____
5. FIELD QC	<u>X</u>	_____	_____	_____
6. LABORATORY BLANKS	<u>O</u>	_____	_____	_____
7. SURROGATES	<u>O</u>	_____	_____	_____
8. LABORATORY FORTIFIED BLANK	<u>X</u>	_____	_____	_____
9. REGIONAL QC	<u>F</u>	_____	_____	_____
10. INTERNAL STANDARDS	<u>O</u>	_____	_____	_____
11. COMPOUND IDENTIFICATION	<u>O</u>	_____	_____	_____
12. COMPOUND QUANTITATION	<u>O</u>	_____	_____	_____
13. SYSTEM PERFORMANCE	<u>O</u>	_____	_____	_____
14. OVERALL ASSESSMENT	<u>X/M</u>	_____	_____	_____

O - No problems or minor problems that affect data quality.

X - No more than about 5% of the data points have limitations on data quality.
Data points are either qualified as estimates or rejected.

M - More than about 5% of the data points are qualified as estimates.

Z - More than about 5% of the data points have been rejected.

F - Not Applicable

TPO ATTENTION: Two samples were analyzed one day past the 14-day technical holding time. A few samples were analyzed outside the 10-day contractual holding time. Dichlorodifluoromethane had a high percent recovery in the LFB (Laboratory Fortified Blank).

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ICF TECHNOLOGY INCORPORATED

URS TDMT Only TDCN: 0312
Project #: 62251 Loc: 09.63 Type: 63

MEMORANDUM

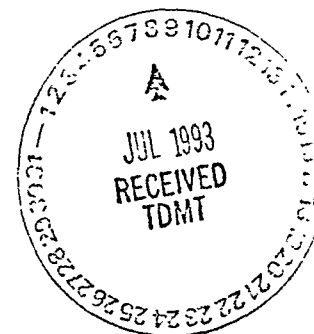
TO: Kevin Mayer
Environmental Engineer
South Coast Groundwater Section (H-6-4)

THROUGH: Richard Bauer
Environmental Scientist
Quality Assurance Management Section (P-3-2)

FROM: Carolyn Studeny *MSW for CS*
Senior Organic Data Reviewer
Environmental Services Assistance Team (ESAT)

DATE: July 6, 1993

SUBJECT: Review of Analytical Data



Attached are comments resulting from ESAT Region 9 review of the following analytical data:

SITE:	Newmark-Muscoy
EPA SSI NO.:	J5
CERCLIS ID NO.:	CAD981434517
CASE/SAS NO.:	SAS 7841Y Memo #04
SDG NO.:	SY5624
LABORATORY:	Analytical Resources, Inc. (ARI)
ANALYSIS:	SAS Volatiles by EPA Drinking Water Method 524.2
SAMPLE NO.:	12 Water Samples (see Case Summary)
COLLECTION DATE:	May 5, 6 and 7, 1993
REVIEWER:	Anjana Vig ESAT/ICF Technology, Inc.

If there are any questions, please contact Carolyn Studeny at (415) 882-3184.

Attachment

cc: Bruce Woods, TPO USEPA Region X
Steve Remaley, USEPA Region IX
Loren Minnich, Sample Management Office
Larry Zinky, URS

TPO: []FYI [X]Attention [X]Action

SAMPLING ISSUES: [X]Yes []No

Data Validation Report

Case No.: SAS 7841Y Memo #04
Site: Newmark-Muscoy
Laboratory: Analytical Resources, Inc. (ARI)
Reviewer: Anjana Vig, ESAT/ICF Technology, Inc.
Date: July 6, 1993

I. Case Summary

SAMPLE INFORMATION:

VOA Sample Numbers: SY5601, SY5602, SY5624, SY5626 through
SY5628, SY5630 through SY5634 and SY5641
Concentration and Matrix: Low Level Water
Analysis: SAS Volatiles by EPA Drinking Water Method
524.2
SOW: Not Applicable
Collection Date: May 5, 6 and 7, 1993
Sample Receipt Date: May 7 and 8, 1993
Analysis Date: May 18, 19 and June 3, 1993

FIELD QC:

Trip Blanks (TB): SY5631 and SY5641
Field Blanks (FB): SY5633
Equipment Blanks (EB): SY5634
Background Samples (BG): None
Field Duplicates (DL): SY5601 and SY5602

METHOD BLANKS AND ASSOCIATED SAMPLES:

VBLK1: SY5624, SY5626 through SY5628, SY5630 through
SY5632 and VBLK1MS
VBLK2: SY5601, SY5602, SY5633, SY5634, SY5641 and
VBLK2MS
VBLK3: SY5627DL, SY5628DL and VBLK3MS

TABLES:

1A: Analytical Results with Qualifications
1B: Data Qualifiers
2: Sample Quantitation Limits of Target Compound
List (TCL) Analytes

TPO ATTENTION:

Due to poor response in the calibrations, the quantitation limits for
several analytes were estimated in several samples.

METHOD NON-COMPLIANCE:

TPO ACTION: The reanalysis of sample numbers SY5627 and SY5628 missed
technical holding times by 16 days.

TPO ATTENTION: All the samples were analyzed 2 and 3 days outside of the
10 day contractual holding time.

DL - Dilution; VBLK#MS - Laboratory Fortified Blank

ESAT-QA-9A-8638/7841YM04.RPT

SAMPLING ISSUES:

TPO ATTENTION: Due to field QC contamination, several results were reported as nondetected.

ADDITIONAL COMMENTS:

2-Chloroethylvinylether was added as a target analyte in compliance with the SAS request.

This report was prepared according to the SAS requirements for the analysis of purgeable halocarbons and aromatics in water samples by EPA Drinking Water Method 524.2 (1989 Revision) and the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

II. Validation Summary

	VOA	
	Acceptable/Comment	
HOLDING TIMES	[N]	[C]
GC/MS TUNE/GC PERFORMANCE	[Y]	[]
CALIBRATIONS	[N]	[D]
FIELD QC	[N]	[B]
LABORATORY BLANKS	[Y]	[]
SURROGATES	[Y]	[]
MATRIX SPIKE/DUPLICATES	[Y]	[]
INTERNAL STANDARDS	[Y]	[]
COMPOUND IDENTIFICATION	[Y]	[]
COMPOUND QUANTITATION	[N]	[A]
SYSTEM PERFORMANCE	[Y]	[]

N/A - Not Applicable

III. Validity and Comments

A. The following results are estimated and flagged "J" in Table 1A:

- All results below the Quantitation Limits (denoted with an "L" qualifier)

Results below the Quantitation Limits (QL) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.

B. Due to trip, equipment and field blank contamination, the results reported in Table 1A for the following analytes are estimated (J):

- Chloroform in sample number SY5627
- Toluene in sample numbers SY5601, SY5602, SY5624, SY5626 and SY5628

A trip blank is intended to detect contaminants introduced during the transport of the samples to the laboratory. Contaminants that are found in the trip blank which are absent in the laboratory blank could be indicative of a problem in transportation, storage, the bottle preparation procedure or other indeterminate error.

An equipment blank is reagent water that has been collected as a sample using decontaminated sampling equipment. The intent of an equipment blank is to monitor for contamination introduced by the sampling activity, although any laboratory introduced contamination will also be present.

Field blanks are intended to detect contaminants that may have been introduced in the field. Contaminants that are found in the field blank which are absent in the laboratory preparation blank could be indicative of a field QC problem, a deficiency in the bottle preparation procedure, blank contamination from manufacturers, a difference in preparation of the laboratory and field blanks or other indeterminate error.

Chloroform and toluene were found in trip, equipment and field blanks at various concentrations (see Table 1A). The results for the samples listed above are considered nondetected and estimated (U,J) and the quantitation limits have been increased according to the blank qualification rules listed below.

No positive results are reported unless the concentration of the compound in the sample exceeds 10 times the amount in any associated blank for the common laboratory contaminants or 5 times the amount for other compounds. If the sample result is greater than the QL, the quantitation limit is raised to the sample result (U,J). If the sample result is less than the QL, the result is reported as nondetected (U,J) at the QL.

- C. Due to holding time outside method QC limits, the detected results and quantitation limits for the following analytes are estimated (J) (see Tables 1A and 2).

- Dichlorodifluoromethane and tetrachloroethene in sample numbers SY5627 and SY5628

The samples were collected on May 5, 1993 and analyzed 29 days later on June 3, 1993. The samples were initially analyzed on May 18, 1993, but due to the response of dichlorodifluoromethane and tetrachloroethene exceeding the calibration range, the samples had to be diluted and reanalyzed. The analysis exceeded the 14-day 40 CFR 136 technical holding time by 16 days.

The detected results for the samples listed above may be biased low and are the minimum values at which these analytes are present in the samples.

D. Due to low Relative Response Factors (RRF) in the Initial and Continuing Calibrations, the quantitation limits for the following analytes are estimated (J) (see Table 2):

- 1,2-Dibromo-3-chloropropane in all samples and method blanks
- 2-Chloroethylvinylether in sample numbers SY5601, SY5602, SY5633, SY5634 and SY5641 and method blank VBLK2

The determination of the Relative Response Factors evaluates instrument sensitivity and is used in the quantitation of the target analytes.

An Average Relative Response Factor (RRF) of 0.014 was observed for 1,2-dibromo-3-chloropropane in the Initial Calibration performed May 2, 1993. RRFs of 0.016, 0.011 and 0.012 for 1,2-dibromo-3-chloropropane and an RRF of 0.043 for 2-chloroethylvinylether were observed in the Continuing Calibrations performed May 18, 19 and June 3, 1993. These deviations are not expected to affect the data quality, except for the analytes listed above.

Since the results for these analytes are nondetected, false negatives may exist.

ANALYTICAL RESULTS

Page 1 of 3

TABLE 1A*

Case No.: SAS 7841Y Memo #04

Site: Newmark-Muscoy

Lab.: Analytical Resources, Inc. (ARI)

Reviewer: Anjana Vig, ESAT/ICF Technology, Inc.

Date: July 6, 1993

Analysis Type: Low Level Water Samples for SAS
 Volatiles by EPA Drinking Water
 Method 524.2

Concentration in ug/L

Station Location	WMW08B-21			WMW08B-22			WMW01G-21			WMW01J-21			WMW-11-21			WMW-12-21			MUNI-107-01		
Sample I.D.	SY5601 D1			SY5602 D1			SY5624			SY5626			SY5627			SY5628			SY5630		
Date of Collection	05/07/93			05/07/93			05/05/93			05/05/93			05/05/93			05/05/93			05/05/93		
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	7			8			0.2 U			0.2 U			39	J	C	12	J	C	2		
Trichlorofluoromethane	0.6			0.7			0.2 U			0.2 U			7			2			0.8		
1,1-Dichloroethene	0.2 U			0.2 U			0.2 U			0.2 U			0.2			0.2 U			0.2 U		
Methylene chloride	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
trans-1,2-Dichloroethene	0.2 U			0.2 U			0.2 U			0.2 U			0.2			0.2 U			0.2 L J		A
1,1-Dichloroethane	0.5			0.5			0.2 U			0.2 L J		A	1			0.3			0.4		
cis-1,2-Dichloroethene	0.6			0.7			0.2 U			0.2 U			2			0.7			2		
Chloroform	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U J		B	0.2 U			0.2 U		
Carbon tetrachloride	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.4			0.2 U		
Benzene	0.2 L J		A	0.1 L J		A	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Trichloroethene	0.8			1			0.2 U			0.2 U			7			2			3		
1,2-Dichloropropane	0.1 L J		A	0.2 U			0.2 U			0.2 U			0.2 L J		A	0.2 U			0.2 U		
Toluene	0.5 U J		B	0.4 U J		B	0.6 U J		B	0.6 U J		B	0.2 U			0.4 U J		B	0.2 U		
Tetrachloroethene	8			10			0.2 U			0.2 U			35	J	C	14	J	C	9		
m,p-Xylene	0.2 L J		A	0.4 U			0.4 U			0.4 U			0.4 U			0.4 U			0.4 U		
o-Xylene	0.1 L J		A	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter.

QL-Quantitation Limits

NA-Not Analyzed

D1, D2, etc.-Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

ANALYTICAL RESULTS

Page 2 of 3

TABLE 1A*

Case No.: SAS 7841Y Memo #04

Site: Newmark-Muscoy

Lab.: Analytical Resources, Inc. (ARI)

Reviewer: Anjana Vig, ESAT/ICF Technology, Inc.

Date: July 6, 1993

Analysis Type: Low Level Water Samples for SAS
 Volatiles by EPA Drinking Water
 Method 524.2

Concentration in ug/L

Station Location	WTR09-01			MUNI-109-01			WFI109-01			WEQ109-01			WTR10-01			Method Blank			Method Blank		
Sample I.D.	SY5631 TB			SY5632			SY5633 FB			SY5634 EB			SY5641 TB			VBLK1			VBLK2		
Date of Collection	05/05/93			05/06/93			05/06/93			05/06/93			05/07/93								
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	0.2 U			0.6			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Trichlorofluoromethane	0.2 U			0.3			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
1,1-Dichloroethene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Methylene chloride	1			0.2 U			0.7			1			1			0.2 U			0.2 U		
trans-1,2-Dichloroethene	0.2 U			0.1 L J		A	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
1,1-Dichloroethane	0.2 U			0.2			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
cis-1,2-Dichloroethene	0.2 U			0.9			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Chloroform	2			0.2 U			2			2			3			0.2 U			0.2 U		
Carbon tetrachloride	0.2 U			0.2 L J		A	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Benzene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Trichloroethene	0.2 U			1			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
1,2-Dichloropropane	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Toluene	0.3			0.2 U			0.2 U			0.1 L J		A	0.2			0.2 U			0.2 U		
Tetrachloroethene	0.2 U			7			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
m,p-Xylene	0.4 U			0.4 U			0.4 U			0.4 U			0.4 U			0.4 U			0.4 U		
o-Xylene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter.

QL-Quantitation Limits

NA-Not Analyzed

D1, D2, etc.-Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

ANALYTICAL RESULTS
TABLE 1A*

Page 3 of 3

Case No.: SAS 7841Y Memo #04

Site: Newmark-Muscoy

Lab.: Analytical Resources, Inc. (ARI)

Reviewer: Anjana Vig, ESAT/ICF Technology, Inc.

Date: July 6, 1993

Analysis Type: Low Level Water Samples for SAS
Volatiles by EPA Drinking Water
Method 524.2

Concentration in ug/L

Station Location Sample I.D. Date of Collection	Method Blank VBLK3			QL														
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	0.2 U			0.2														
Trichlorofluoromethane	0.2 U			0.2														
1,1-Dichloroethene	0.2 U			0.2														
Methylene chloride	0.2 U			0.2														
trans-1,2-Dichloroethene	0.2 U			0.2														
1,1-Dichloroethane	0.2 U			0.2														
cis-1,2-Dichloroethene	0.2 U			0.2														
Chloroform	0.2 U			0.2														
Carbon tetrachloride	0.2 U			0.2														
Benzene	0.2 U			0.2														
Trichloroethene	0.2 U			0.2														
1,2-Dichloropropane	0.2 U			0.2														
Toluene	0.2 U			0.2														
Tetrachloroethene	0.2 U			0.2														
m,p-Xylene	0.4 U			0.4														
o-Xylene	0.2 U			0.2														

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter.

QL-Quantitation Limits

NA-Not Analyzed

D1, D2, etc.-Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

TABLE 1B
DATA QUALIFIERS

The definitions of the following qualifiers are prepared according to the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

NO QUALIFIERS indicate that the data are acceptable both qualitatively and quantitatively.

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- L Indicates results which fall below the Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

TABLE 2
Sample Quantitation Limits

Case No.: SAS 7841Y Memo #04
 Site: Newmark-Muscoy
 Laboratory: Analytical Resources, Inc. (ARI)
 Reviewer: Anjana Vig
 ESAT/ICF Technology, Inc.
 Date: July 6, 1993

<u>Volatile Compounds</u>	<u>Units, ug/L</u>	<u>Q</u>	<u>C</u>
Benzene	0.2		
Bromobenzene	0.2		
Bromochloromethane	0.2		
Bromodichloromethane	0.2		
Bromoform	0.5		
Bromomethane	0.2		
n-Butylbenzene	0.2		
sec-Butylbenzene	0.2		
tert-Butylbenzene	0.2		
Carbon tetrachloride	0.2		
Chlorobenzene	0.2		
Chloroethane	0.2		
Chloroform	0.2		
Chloromethane	0.2		
2-Chlorotoluene	0.2		
4-Chlorotoluene	0.2		
Dibromochloromethane	0.2		
1,2-Dibromo-3-chloropropane	0.5	J	D
1,2-Dibromoethane	0.2		
Dibromomethane	0.2		
1,2-Dichlorobenzene	0.2		
1,3-Dichlorobenzene	0.2		
1,4-Dichlorobenzene	0.2		
Dichlorodifluoromethane	0.2	J	C
1,1-Dichloroethane	0.2		
1,2-Dichloroethane	0.2		
1,1-Dichloroethene	0.2		
cis-1,2-Dichloroethene	0.2		
trans-1,2-Dichloroethene	0.2		
1,2-Dichloropropane	0.2		
1,3-Dichloropropane	0.2		
2,2-Dichloropropane	0.2		
1,1-Dichloropropene	0.2		
cis-1,3-Dichloropropene	0.2		
trans-1,3-Dichloropropene	0.2		

Q - Qualifier

C - Comment

TABLE 2
(cont'd)

<u>Volatile Compounds</u>	<u>Units, ug/L</u>	<u>Q</u>	<u>C</u>
Ethylbenzene	0.2		
Hexachlorobutadiene	0.2		
Isopropylbenzene	0.2		
4-Isopropyltoluene	0.2		
Methylene chloride	0.2		
Naphthalene	0.2		
n-Propylbenzene	0.2		
Styrene	0.2		
1,1,1,2-Tetrachloroethane	0.2		
1,1,2,2-Tetrachloroethane	0.2		
Tetrachloroethene	0.2	J	C
Toluene	0.2		
1,2,3-Trichlorobenzene	0.2		
1,2,4-Trichlorobenzene	0.2		
1,1,1-Trichloroethane	0.2		
1,1,2-Trichloroethane	0.2		
Trichloroethene	0.2		
Trichlorofluoromethane	0.2		
1,2,3-Trichloropropane	0.2		
1,2,4-Trimethylbenzene	0.2		
1,3,5-Trimethylbenzene	0.2		
Vinyl chloride	0.2		
Xylene (ortho)	0.2		
Xylene (meta & para)	0.4		
2-Chloroethylvinylether	0.2	J	D

Q - Qualifier

C - Comment

TABLE 2
(cont'd)

To calculate the sample quantitation limits, multiply QL by the following factors:

<u>Sample No.</u>	<u>Volatiles</u>
SY5601	1.00
SY5602	1.00
SY5624	1.00
SY5626	1.00
SY5627	1.00
SY5628	1.00
SY5630	1.00
SY5631	1.00
SY5632	1.00
SY5633	1.00
SY5634	1.00
SY5641	1.00
Method Blanks	1.00

TPO: []FYI [X]Attention [X]Action

Region IX

ORGANIC REGIONAL DATA ASSESSMENT

Case No. SAS 7841Y Memo #04 LABORATORY Analytical Resources, Inc.

SDG NO. SY5624 SITE NAME Newmark-Muscov

SOW _____ REVIEW COMPLETION DATE July 6, 1993

REVIEWER [] ESD [X] ESAT REVIEWER'S NAME Anjana Vig

NO. OF SAMPLES 12 WATER _____ SOIL _____ OTHER _____

	VOA	BNA	PEST	OTHER
1. HOLDING TIMES	<u>X</u>	_____	_____	_____
2. GC-MS TUNE/GC PERFORMANCE	<u>O</u>	_____	_____	_____
3. INITIAL CALIBRATIONS	<u>X</u>	_____	_____	_____
4. CONTINUING CALIBRATIONS	<u>X</u>	_____	_____	_____
5. FIELD QC	<u>X</u>	_____	_____	_____
6. LABORATORY BLANKS	<u>O</u>	_____	_____	_____
7. SURROGATES	<u>O</u>	_____	_____	_____
8. MATRIX SPIKE/DUPLICATES	<u>O</u>	_____	_____	_____
9. REGIONAL QC	<u>F</u>	_____	_____	_____
10. INTERNAL STANDARDS	<u>O</u>	_____	_____	_____
11. COMPOUND IDENTIFICATION	<u>O</u>	_____	_____	_____
12. COMPOUND QUANTITATION	<u>X</u>	_____	_____	_____
13. SYSTEM PERFORMANCE	<u>O</u>	_____	_____	_____
14. OVERALL ASSESSMENT	<u>X</u>	_____	_____	_____

O - No problems or minor problems that affect data quality.

X - No more than about 5% of the data points have limitations on data quality.
Data points are either qualified as estimates or rejected.

M - More than about 5% of the data points are qualified as estimates.

Z - More than about 5% of the data points have been rejected.

F - Not Applicable

TPO ACTION: The reanalysis of sample numbers SY5627 and SY5628 missed technical holding times by 16 days.

TPO: []FYI [X]Attention [X]Action Region IX
ORGANIC REGIONAL DATA ASSESSMENT

Case No. SAS 7841Y Memo #04 LABORATORY Analytical Resources, Inc.
SDG NO. SY5624 SITE NAME Newmark-Muscoy
SOW _____ REVIEW COMPLETION DATE July 6, 1993
REVIEWER [] ESD [X] ESAT REVIEWER'S NAME Anjana Vig
NO. OF SAMPLES 12 WATER _____ SOIL _____ OTHER _____

TPO ATTENTION: All the samples were analyzed 2 and 3 days outside of the 10 day contractual holding time. Due to field QC contamination, several results were reported as nondetected. Due to poor response in the calibrations, the quantitation limits for several analytes were estimated in several samples.

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URS TDMT Only TDCN: 0325
Project #: 62251 Loc: 09.63 Type: 63



ICF TECHNOLOGY INCORPORATED

MEMORANDUM

TO: Kevin Mayer
Environmental Engineer
South Coast Ground Water Section (H-6-4)

THROUGH: Richard Bauer
Environmental Scientist
Quality Assurance Management Section (P-3-2)

FROM: Margie D. Weiner *MDW*
Senior Data Review Oversight Chemist
Environmental Services Assistance Team (ESAT)

DATE: July 22, 1993

SUBJECT: Review of Analytical Data

Attached are comments resulting from ESAT Region IX review of the following analytical data:

SITE:	Newmark-Muscoy
EPA SSI NO.:	J5
CERCLIS ID NO.:	CAD981434517
CASE/SAS NO.:	SAS 7841Y-01 Memo #05
SDG NO.:	SY5635
LABORATORY:	Analytical Resources, Inc. (ARI)
ANALYSIS:	SAS Volatiles by EPA Drinking Water Method 524.2
SAMPLE NO.:	8 Water Samples
COLLECTION DATE:	May 24 and 25, 1993
REVIEWER:	Anjana Vig ESAT/ICF Technology, Inc.

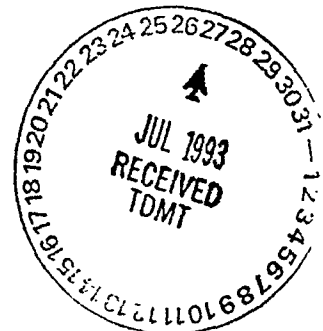
If there are any questions, please contact Margie D. Weiner at (415) 882-3061.

Attachment

cc: Bruce Woods, TPO USEPA Region X
Steve Remaley, USEPA Region IX
Loren Minnich, Sample Management Office
Larry Zinky, URS SAC

TPO: []FYI [X]Attention []Action

SAMPLING ISSUES: [X]Yes []No



Data Validation Report

Case No.: SAS 7841Y-01 Memo #05
Site: Newmark-Muscoy
Laboratory: Analytical Resources, Inc. (ARI)
Reviewer: Anjana Vig, ESAT/ICF Technology, Inc.
Date: July 22, 1993

I. Case Summary

SAMPLE INFORMATION:

VOA Sample Numbers: SY5635, SY5637, SY5638, SY5640 and SY5642
through SY5645
Concentration and Matrix: Low Level Water
Analysis: SAS Volatiles by EPA Drinking Water Method
524.2
SOW: Not Applicable
Collection Date: May 24 and 25, 1993
Sample Receipt Date: May 25 and 26, 1993
Analysis Date: June 4 and 5, 1993

FIELD QC:

Trip Blanks (TB): SY5642 and SY5643
Field Blanks (FB): None
Equipment Blanks (EB): None
Background Samples (BG): None
Field Duplicates (D1): SY5637 and SY5638

METHOD BLANKS AND ASSOCIATED SAMPLES:

VBLK1: SY5635, SY5637, SY5638, SY5640, SY5642
through SY5644 and VBLK1MS
VBLK2: SY5645 and VBLK2MS

TABLES:

1A: Analytical Results with Qualifications
1B: Data Qualifiers
2: Sample Quantitation Limits of Target Compound
List (TCL) Analytes

TPO ATTENTION:

Due to calibration problems, detected results and quantitation limits for several analytes were estimated.

METHOD NON-COMPLIANCE:

TPO ATTENTION: Several samples were analyzed 1 day outside of the contractual holding time of 10 days from sample receipt. However this does not affect the quality of the data.

SAMPLING ISSUES:

TPO ATTENTION: Due to trip blank contamination, several detected results for trichlorofluoromethane and methylene chloride were reported as nondetected (U,J).

ADDITIONAL COMMENTS:

2-Chloroethylvinylether was added as a target analyte in compliance with the SAS request.

This report was prepared according to the SAS requirements for the analysis of purgeable halocarbons and aromatics in water samples by EPA Drinking Water Method 524.2 (1989 Revision) and the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

II. Validation Summary

	VOA	
	Acceptable/Comment	
HOLDING TIMES	[Y]	[]
GC/MS TUNE/GC PERFORMANCE	[Y]	[]
CALIBRATIONS	[N]	[C]
FIELD QC	[N]	[B]
LABORATORY BLANKS	[Y]	[]
SURROGATES	[Y]	[]
LABORATORY FORTIFIED BLANK	[Y]	[D]
INTERNAL STANDARDS	[Y]	[]
COMPOUND IDENTIFICATION	[Y]	[]
COMPOUND QUANTITATION	[N]	[A]
SYSTEM PERFORMANCE	[Y]	[]

N/A - Not Applicable

III. Validity and Comments

A. The following results are estimated and flagged "J" in Table 1A:

- All results below the Contract Required Quantitation Limits (denoted with an "L" qualifier)

Results below the Contract Required Quantitation Limits (CRQL) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.

B. Due to trip blank contamination, the results reported in Table 1A for the following analytes are estimated (J):

- Trichlorofluoromethane in sample numbers SY5635, SY5637, SY5638 and SY5640
- Methylene chloride in sample number SY5640

A trip blank is intended to detect contaminants introduced during the transport of the samples to the laboratory. Contaminants that are found in the trip blank which are absent in the laboratory blank could be indicative of a problem in transportation, storage, the bottle preparation procedure or other indeterminate error.

Trichlorofluoromethane and methylene chloride were found in trip blanks SY5642 and SY5643 at various concentrations (see Table 1A). The results for the samples listed above are considered nondetected and estimated (U,J) and the quantitation limits have been increased according to the blank qualification rules listed below.

No positive results are reported unless the concentration of the compound in the sample exceeds 10 times the amount in any associated blank for the common laboratory contaminants or 5 times the amount for other compounds. If the sample result is greater than the CRQL, the quantitation limit is raised to the sample result (U,J). If the sample result is less than the CRQL, the result is reported as nondetected (U,J) at the CRQL.

- C. Due to low Relative Response Factors (RRF) in the Initial and Continuing Calibrations, the quantitation limits for the following analytes are estimated (J) (see Table 2):

- 1,2-Dibromo-3-chloropropane in all samples and method blanks

The determination of the Relative Response Factors evaluates instrument sensitivity and is used in the quantitation of the target analytes.

An Average Relative Response Factor (RRF) of 0.014 was observed for 1,2-dibromo-3-chloropropane in the Initial Calibration performed May 2, 1993. RRFs of 0.014 and 0.012 were also observed for 1,2-dibromo-3-chloropropane in the Continuing Calibrations performed June 4 and 5, 1993. These values are below the 0.05 QC advisory validation criterion.

Since the results for these analytes are nondetected, false negatives may exist.

- D. The following Laboratory Fortified Blank percent recoveries were outside of the 80-120% method QC limits.

<u>Analyte</u>	<u>% Recovery</u>
1,2-dibromo-3-chloropropane	69%

The purpose of the LCS is to serve as a monitor of the overall performance of all steps in the analysis, including sample preparation under ideal conditions. The result obtained in the analysis of VBLK2MS for 1,2-dibromo-3-chloropropane was not within the control limits of 80-120% as shown above. This QC outlier is not expected to affect the data and no qualifications were made.

ANALYTICAL RESULTS
TABLE 1A*

Page 1 of 1

Case No.: SAS 7841Y-01 Memo #05

Site: Newmark-Muscoy

Lab.: Analytical Resources, Inc. (ARI)

Reviewer: Anjana Vig, ESAT/ICF Technology, Inc.

Date: July 22, 1993

Analysis Type: Low Level Water Samples
for SAS Volatiles

Concentration in ug/L

Station Location	WMW-113-01			WMW-114-01			WMW-114-02			WMW-115-01			WTR11-01			WTR12-01			WPU01-01		
Sample I.D.	SY5635			SY5637 D1			SY5638 D1			SY5640			SY5642 TB			SY5643 TB			SY5644		
Date of Collection	5/24/93			5/25/93			5/25/93			5/24/93			5/24/93			5/25/93			5/25/93		
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	0.2 L J		A	2			2			10			0.2 U			0.2 U			0.3		
Chloromethane	0.2			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Vinyl chloride	0.2 U			0.2 U			0.2 U			2			0.2 U			0.2 U			0.2 U		
Trichlorofluoromethane	0.2 U J		B	0.6 U J		B	0.6 U J		B	1 U J		B	0.2 L J		A	0.2 U			0.2 U		
Methylene chloride	0.2 U			0.2 U			0.2 U			0.7 U J		B	0.7			0.6			0.2 U		
1,1-Dichloroethane	0.2 U			0.2 U			0.2 U			0.3			0.2 U			0.2 U			0.2 U		
cis-1,2-Dichloroethene	0.2 U			0.3			0.2			7			0.2 U			0.2 U			0.3		
Chloroform	0.2 U			0.2 U			0.2 U			0.2 U			3			3			0.2 U		
Benzene	0.2 U			0.2 U			0.2 U			0.2			0.2 U			0.2 U			0.2 U		
Trichloroethene	0.2 U			0.2 U			0.2 U			0.8			0.2 U			0.2 U			0.3		
1,2-Dichloropropane	0.2 U			0.2 U			0.2 U			0.2			0.2 U			0.2 U			0.2 U		
Toluene	0.4			0.2 U			0.2 U			0.2 L J		A	0.2 U			0.2 U			0.2 U		
Tetrachloroethene	0.6			4			4			9			0.2 U			0.2 U			1		
Chlorobenzene	0.2 U			0.2 U			0.2 U			0.3			0.2 U			0.2 U			0.2 U		
Isopropylbenzene	2			2			2			2			0.2 U			0.2 U			0.2 U		
1,4-Dichlorobenzene	0.2 U			0.2 U			0.2 U			0.4			0.2 U			0.2 U			0.2 U		

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter.

CRQL- Contract Required Quantitation Limits

NA-Not Analyzed

D1, D2, etc.-Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

ND-Not Detected

ANALYTICAL RESULTS
TABLE 1A*

Page 2 of 2

Case No.: SAS 7841Y-01 Memo #05

Site: Newmark-Muscoy

Lab.: Analytical Resources, Inc. (ARI)

Reviewer: Anjana Vig, ESAT/ICF Technology, Inc.

Date: July 22, 1993

Analysis Type: Low Level Water Samples
for SAS Volatiles

Concentration in ug/L

Station Location	WPU02-01			METHOD BLANK			METHOD BLANK			CRQL								
Sample I.D.	SY5645			VBLK1			VBLK2											
Date of Collection	5/25/93																	
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	0.3			0.2 U			0.2 U			0.2								
Chloromethane	0.2 U			0.2 U			0.2 U			0.2								
Vinyl chloride	0.2 U			0.2 U			0.2 U			0.2								
Trichlorofluoromethane	0.2 U			0.2 U			0.2 U			0.2								
Methylene chloride	0.2 U			0.2 U			0.2 U			0.2								
1,1-Dichloroethane	0.2 U			0.2 U			0.2 U			0.2								
cis-1,2-Dichloroethene	0.4			0.2 U			0.2 U			0.2								
Chloroform	0.2 U			0.2 U			0.2 U			0.2								
Benzene	0.2 U			0.2 U			0.2 U			0.2								
Trichloroethene	0.6			0.2 U			0.2 U			0.2								
1,2-Dichloropropane	0.2 U			0.2 U			0.2 U			0.2								
Toluene	0.2 U			0.2 U			0.2 U			0.2								
Tetrachloroethene	2			0.2 U			0.2 U			0.2								
Chlorobenzene	0.2 U			0.2 U			0.2 U			0.2								
Isopropylbenzene	0.2 U			0.2 U			0.2 U			0.2								
1,4-Dichlorobenzene	0.2 U			0.2 U			0.2 U			0.2								

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter.

CRQL- Contract Required Quantitation Limits

NA-Not Analyzed

D1, D2, etc.-Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

ND-Not Detected

TABLE 1B
DATA QUALIFIERS

The definitions of the following qualifiers are prepared according to the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

NO QUALIFIERS indicate that the data are acceptable both qualitatively and quantitatively.

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- L Indicates results which fall below the Contract Required Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

TABLE 2
Sample Quantitation Limits

Case No.: SAS 7841Y-01 Memo #05
 Site: Newmark-Muscoy
 Laboratory: Analytical Resources, Inc. (ARI)
 Reviewer: Anjana Vig
 ESAT/ICF Technology, Inc.
 Date: July 22, 1993

<u>Volatile Compounds</u>	<u>Units, ug/L</u>	<u>Q</u>	<u>C</u>
Benzene	0.2		
Bromobenzene	0.2		
Bromochloromethane	0.2		
Bromodichloromethane	0.2		
Bromoform	0.5		
Bromomethane	0.2		
n-Butylbenzene	0.2		
sec-Butylbenzene	0.2		
tert-Butylbenzene	0.2		
Carbon tetrachloride	0.2		
Chlorobenzene	0.2		
Chloroethane	0.2		
Chloroform	0.2		
Chloromethane	0.2		
2-Chlorotoluene	0.2		
4-Chlorotoluene	0.2		
Dibromochloromethane	0.2		
1,2-Dibromo-3-chloropropane	0.5	J	C
1,2-Dibromoethane	0.2		
Dibromomethane	0.2		
1,2-Dichlorobenzene	0.2		
1,3-Dichlorobenzene	0.2		
1,4-Dichlorobenzene	0.2		
Dichlorodifluoromethane	0.2		
1,1-Dichloroethane	0.2		
1,2-Dichloroethane	0.2		
1,1-Dichloroethene	0.2		
cis-1,2-Dichloroethene	0.2		
trans-1,2-Dichloroethene	0.2		
1,2-Dichloropropane	0.2		
1,3-Dichloropropane	0.2		
2,2-Dichloropropane	0.2		
1,1-Dichloropropene	0.2		
cis-1,3-Dichloropropene	0.2		
trans-1,3-Dichloropropene	0.2		

Q - Qualifier

C - Comment

TABLE 2
(cont'd)

<u>Volatile Compounds</u>	<u>Units, ug/L</u>	<u>Q</u>	<u>C</u>
Ethylbenzene	0.2		
Hexachlorobutadiene	0.2		
Isopropylbenzene	0.2		
4-Isopropyltoluene	0.2		
Methylene chloride	0.2		
Naphthalene	0.2		
n-Propylbenzene	0.2		
Styrene	0.2		
1,1,1,2-Tetrachloroethane	0.2		
1,1,2,2-Tetrachloroethane	0.2		
Tetrachloroethene	0.2		
Toluene	0.2		
1,2,3-Trichlorobenzene	0.2		
1,2,4-Trichlorobenzene	0.2		
1,1,1-Trichloroethane	0.2		
1,1,2-Trichloroethane	0.2		
Trichloroethene	0.2		
Trichlorofluoromethane	0.2		
1,2,3-Trichloropropane	0.2		
1,2,4-Trimethylbenzene	0.2		
1,3,5-Trimethylbenzene	0.2		
Vinyl chloride	0.2		
Xylene (ortho)	0.2		
Xylene (meta & para)	0.4		
2-Chloroethylvinylether	0.2		

Q - Qualifier

C - Comment

To calculate the sample quantitation limits, multiply QL by the following factors:

<u>Sample No.</u>	<u>Volatiles</u>
SY5635	1.00
SY5637	1.00
SY5638	1.00
SY5640	1.00
SY5642	1.00
SY5643	1.00
SY5644	1.00
SY5645	1.00
Method Blank	1.00

TPO: []FYI [X]Attention []Action

Region IXORGANIC REGIONAL DATA ASSESSMENTCase No. SAS 7841Y-01 Memo #05 LABORATORY Analytical Resources IncSDG NO. SY5635 SITE NAME Newmark-MuscovSOW EPA Method 524.2 REVIEW COMPLETION DATE July 22, 1993REVIEWER [] ESD [X] ESAT REVIEWER'S NAME Anjana Vig

NO. OF SAMPLES	<u>8</u>	WATER		SOIL		OTHER	
				VOA	BNA	PEST	OTHER
1. HOLDING TIMES				<u>0</u>	<u> </u>	<u> </u>	<u> </u>
2. GC-MS TUNE/GC PERFORMANCE				<u>0</u>	<u> </u>	<u> </u>	<u> </u>
3. INITIAL CALIBRATIONS				<u>X</u>	<u> </u>	<u> </u>	<u> </u>
4. CONTINUING CALIBRATIONS				<u>0</u>	<u> </u>	<u> </u>	<u> </u>
5. FIELD QC				<u>X</u>	<u> </u>	<u> </u>	<u> </u>
6. LABORATORY BLANKS				<u>0</u>	<u> </u>	<u> </u>	<u> </u>
7. SURROGATES				<u>0</u>	<u> </u>	<u> </u>	<u> </u>
8. LABORATORY FORTIFIED BLANK				<u>0</u>	<u> </u>	<u> </u>	<u> </u>
9. REGIONAL QC				<u>N/A</u>	<u> </u>	<u> </u>	<u> </u>
10. INTERNAL STANDARDS				<u>0</u>	<u> </u>	<u> </u>	<u> </u>
11. COMPOUND IDENTIFICATION				<u>0</u>	<u> </u>	<u> </u>	<u> </u>
12. COMPOUND QUANTITATION				<u>X</u>	<u> </u>	<u> </u>	<u> </u>
13. SYSTEM PERFORMANCE				<u>0</u>	<u> </u>	<u> </u>	<u> </u>
14. OVERALL ASSESSMENT				<u>X</u>	<u> </u>	<u> </u>	<u> </u>

0 - No problems or minor problems that affect data quality.

X - No more than about 5% of the data points have limitations on data quality.
Data points are either qualified as estimates or rejected.

M - More than about 5% of the data points are qualified as estimates.

Z - More than about 5% of the data points have been rejected.

N/A - Not Applicable

TPO ATTENTION: Due to calibration problems, detected results and quantitation limits for several analytes were estimated. Several samples were analyzed 1 day outside of the contractual holding time of 10 days from sample receipt. Due to trip blank QC contamination, several detected results for trichlorofluoromethane and methylene chloride were reported as nondetected.